

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/063898 A1

(51) International Patent Classification⁷: **C09D 1/00**,
5/00, 5/14, 5/33

Yeong-Sool [KR/KR]; c/o POSCO, 1 Koedong-dong,
Nam-ku, Pohang, Kyungsangbook-do 790-300 (KR).

(21) International Application Number:
PCT/KR2004/003454

(74) Agent: **C & S PATENT AND LAW OFFICE**; C-2306
Daelim Acrotel, 467-6 Dogok-dong, Kangnam-gu., Seoul
135-971 (KR).

(22) International Filing Date:
27 December 2004 (27.12.2004)

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2003-0099569
30 December 2003 (30.12.2003) KR
10-2004-0112446
24 December 2004 (24.12.2004) KR

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*):
POSCO [KR/KR]; 1 Koedong-dong, Nam-ku, Po-
hang,, Kyungsangbook-do 790-300 (KR).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **KIM, Jin-Tae**
[KR/KR]; c/o POSCO, 1 Koedong-dong, Nam-ku,
Pohang,, Kyungsangbook-do 790-300 (KR). **JUNG,**
Byung-Kuk [KR/KR]; c/o POSCO, 5 Dongchon-dong,
Nam-ku, Pohang, Kyungsangbook-do 790-360 (KR). **JIN,**

Published:

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: PAINT COMPOSITION IMPROVED FAR-INFRARED RADIATION, ANTIBIOSIS AND SOLVENT RESISTANCE,
AND PRECOATED METAL SHEET COATED THE SAME

(57) Abstract: Disclosed is a paint composition having high far-infrared radioactivity, antibiotic activity and solvent resistance and a precoated metal sheet for home appliances, coated with the paint composition. According to the current invention, a paint composition including a thermosetting resin, 9-60 parts by weight of ceramic powder and 0.2-4.0 parts by weight of phosphoric acid, based on 100 parts by weight of the thermosetting resin, is provided, and a precoated metal sheet coated with such a paint composition is also provided. The paint composition and the precoated metal sheet coated with the paint composition manifest high far-infrared radioactivity and antibiotic activity, and as well, have storage stability and solvent resistance increased by neutralizing the alkalinity of ceramic powder using phosphoric acid. Further, a silane compound and a curing catalyst are additionally used to increase gloss and processability.



WO 2005/063898 A1